Kansas Levels	**III**
INSTITUTIONAL ORGANIZATION	
Trauma program	E
Trauma service[1]	E
Trauma team	E
Trauma Team Activation policy	E
Trauma program medical director[2]	E
Trauma multidisciplinary committee	E
Trauma coordinator/TPM	E
Formal credentialing policy for the trauma program	D
[1]Trauma service does not need to be a separate formal service [2]Person responsible for trauma care in the facility	
Hospital/Departments DIVISIONS/SECTIONS	
Surgery	E
Neurological surgery	—
Neurosurgical trauma liaison	—
Orthopedic surgery[3]	D
Orthopedic trauma liaison	D
Emergency medicine	E
Anesthesia	E
Published on-call schedule	E
[3]May be a section or division of surgery	
Clinical Capabilities (Specialty Immediately Available 24 hours/day)* 15-30 minutes	
General surgery	E
Published back-up schedule[4]	D
Dedicated to single hospital when on-call	D
Anesthesia (see Chapter 11)[5]	E
Emergency medicine	E
[4]back-up call schedule is critical to timely care of trauma pt. when community surgeon is not available. [5]anesthesiologists or CRNAs	
On-Call and promptly available 24 hours/day (Within 30-60 minutes)	
Cardiac surgery	—
Hand surgery	D

Micro vascular/replant surgery	—
Neurological surgery	D
Dedicated to one hospital or back-up Call (see Chapter 8)	D
Obstetrics/gynecologic surgery	D
Ophthalmic surgery	D
Oral/maxillofacial surgery	D
Orthopedic surgery [6]	E
Dedicated to one hospital or back-up call (see Chapter9)	D
Plastic surgery	D
Critical care medicine	D
Radiology	E
Thoracic surgery	D
[6] If orthopedic services not available, pt. should be transferred	
Clinical Qualifications**	
General/trauma surgeon Chapter 6)	
Current board certification [7]	E
16 hours CME/year	D
ATLS Completion	E
Peer review committee attendance >50%	E
Multidisciplinary committee attendance	E
[7]Certified in surgery by the Am. Board of Surgery	
Emergency medicine (see Chapter 7)	
Board certification	D
Trauma education: 16 hours CME/year	D
Peer review committee attendance >50%	E
Multidisciplinary committee attendance	E
ATLS completion	E
Neurosurgery (see Chapter 8)	
Current board certification	—
16 hours CME/year	D
ATLS completion	D
Peer review committee attendance >50%	E
Multidisciplinary committee attendance	E

Orthopedic surgery (see Chapter 9)	
Board Certification	D
16 hours CME in skeletal trauma	D
ATLS completion	D
Peer review committee attendance >50%	E
Multidisciplinary committee attendance	E
Facilities/Resources/Capabilities	
Volume Performance	
Trauma admissions 1,200/year	—
Patients with ISS>15 (240 total or 35 patients/surgeon)2	—
Presence of surgeon at resuscitation **- see footnote on page 7.	E
Presence of surgeon at operative procedures	E
Emergency Department (ED)	
Personnel	
Designated physician director	E
Equipment for resuscitation for patients of **all ages**	
Airway control and ventilation equipment[8]	E
Pulse oximetry	E
Suction devices	E
Electrocardiograph-Oscilloscope-defibrillator	E
Internal paddles[9]	E
CVP monitoring equipment	E
Standard IV fluids and administration sets	E
Large-Bore intravenous catheters	E
Sterile surgical sets for:	
1) Airway control/cricothyrotomy	E
2) Thoracostomy	E
3) Venous cutdown	E
4) Central line insertion	E
5) Thoracotomy[10]	E
6) Peritoneal lavage	E
Chest decompression	E
Gastric decompression	E
Arterial catheters	D
Ultrasound	D
Drugs necessary for emergency care	E

Emergency Room Cont'

X ray availability 24hours/day	E
Cervical spine immobilization	E
Broselow tape	E
Thermal control equipment	
1) For patient	E
2) For fluids and blood	E
Rapid infuser system	E
Qualitative end-tidal CO2 determination	E
Communication with EMS vehicles	E
[8]bag-valve mask equipment acceptable [9] Adult and pediatric sizes [10] If thoracic capability available	
Operating Room	
Immediately available 24 hours/day *(within 30 minutes or less)*	D
Personnel	
In-house 24 hours/day	__
Available 24 hours/day	E
Age-specific equipment	
1) Cardiopulmonary bypass	__
2) Operating microscope	D
Thermal control equipment [11]	
1) For Patient	E
2) For fluids and blood	E
X ray capability, including c-arm image intensifier	E
Endoscopes, bronchoscope	E
Craniotomy instruments	D
Equipment for long bone and pelvic fixation	E
Rapid infuser system	E
Cell Saver/Autotransfusor	D
Postanesthetic Recovery Room (SICU is acceptable)	
** if services are provided at a level IV, criteria is applicable	
Registered nurse available 24 hours/day	E
Equipment for monitoring and resuscitation	E
Intracranial pressure monitoring equipment	D
Pulse oximetry	E
Thermal control	E

Intensive or Critical Care unit for Injured patients.	
** if services are provided at a Level IV, criteria is applicable.	
Registered nurses with trauma education	E
Designated surgical director or surgical co-director	E
Surgical ICU service physician in-house 24 hours/day (see Chapter 11)	D
Surgically directed and staffed ICU service	D
Equipment for monitoring and resuscitation	E
Intracranial monitoring equipment	—
Pulmonary artery monitoring equipment	E
Respiratory Therapy Services	
Available in-house 24 hours/day	D
On call 24 hours/day	E
Radiological Services (Available 24 hours/day)	
In-house radiology technologist	D
Angiography[13]	D
Sonography [13]	E
Computed tomography	E
In-house CT technician	—
Magnetic resonance imaging	D
[13]Implies that both equip & tech are available	
Clinical Laboratory Service (Available 24 hours/day)	
Standard analyses of blood, urine, and other body fluids, including microsampling when appropriate	E
Blood typing and cross-matching	E
Coagulation studies	E
Comprehensive blood bank or access to a community central blood bank and adequate storage facilities	E
Blood gases and pH determinations	E
Microbiology	E
Drug & ETOH screening	D
Massive transfusion policy	D
Acute Hemodialysis	
In-house	—
Transfer agreement	E
Burn Care—Organized	
In-house or transfer agreement with Burn Center	E

ACUTE SPINAL CORD MANAGEMENT	
In-house or transfer agreement with Regional Acute Spinal Cord Injury Rehabilitation Center	E
REHABILITATIONS SERVICES	
Transfer agreement to an approved rehabilitation facility	E
Physical therapy	E
Occupational therapy	D
Speech therapy	D
Social Service	E
PERFORMANCE IMPROVEMENT	
Performance improvement programs	E
Trauma registry	
In-house	E
Participation in state, local, or regional registry	E
Orthopedic database	—
Audit of all trauma deaths	E
Morbidity and mortality review	E
Trauma conference—multidisciplinary	E
Medical nursing audit	E
Review of prehospital trauma care	E
Review of times and reasons for trauma-related bypass	D
Review of times and reasons for transfer of injured patients	D
Performance improvement personnel dedicated to care of injured patients	D
Participation with RTCs	E
CONTINUING EDUCATION OUTREACH	
General surgery residency program (see Chapter 17)	—
ATLS provide/participate	D
Programs provided by hospital for:	
Staff/community physicians (CME)	E
Nurses	E
Allied health personnel	E
Prehospital personnel provision/participation	E
PREVENTION	
Injury control studies	—
Collaboration with other institutions	D
Monitor progress/effect of prevention programs	D
Designated prevention coordinator-spokesperson for injury control	D
Outreach activities	D
Information resources for public	D
Collaboration with existing national, regional, and state programs	D
Coordination and/or participation in community prevention activities	E

RESEARCH	
Trauma registry performance improvement activities	E
Research committee	—
Identifiable IRB process	—
Extramural educational presentations	D
Number of scientific publications	—

ACS Footnotes:

1 When emergency medicine specialists are not involved with the care of the injured patient, these criteria are not required.

2 The mechanism to calculate ISS should be through use of AIS 90 and handcoding.

3 An operating room must be adequately staffed and immediately available in a Level I trauma center. This is met by having a complete operating room team in the hospital at all times, so if an injured patient requires operative care, the patient can receive it in the most expeditious manner. These criteria cannot be met by individuals who are also dedicated to other functions within the institution. Their primary function must be the operating room.

An operating room must be adequately staffed and available when needed in a timely fashion in a Level II trauma center. The need to have an in-house OR team will depend on a number of things, including patient population served, ability to share responsibility for OR coverage with other hospital staff, prehospital communication, and the size of the community served by the institution. If an out-of-house OR team is used, then this aspect of care must be monitored by the performance improvement program.

Brasel KJ, Akason J. Weigelt JA: The dedicated operating room for trauma: A costly recommendation*, J Trauma 1998;* 14: 832-838.

4 In area where the Level III hospital is the lead institution, these educational activities are an essential criteria. When the Level III is in an area that contains other hospital resources, such as a Level I or II, then this criteria is no longer essential.

5 Four Educational Presentations per year for the program. These presentations must be given out side the academically affiliated institutions of the Trauma Center.

6 Publications should appear in peer-reviewed journals. *Index Medicus* listing is preferable. In a three-year cycle, the minimum acceptable number is 10 for the entire trauma program. This must include a minimal activity of one publication (per review cycle) form the physicians representing each of the four following specialties: emergency medicine, general surgery, orthopedic surgery, and neurosurgery.

**Presence of surgeon at resuscitation within 30 minutes of being called for majority of major trauma
** Major trauma defined as:
1. Confirmed systolic BP < 90 mm Hg at any time in adults or age specific hypotension in children
2. Respiratory compromise, airway obstruction, or intubation prior to patient arrival
3. Patients transferred from other hospitals who are receiving blood transfusions to maintain vital signs
4. ED physician or trauma surgeon discretion
5. Gunshot wound to the neck, thorax or abdomen
6. Glascow Coma Scale score of 8 or less secondary to trauma

D= Desired
E= Essential
__= Not applicable